the Orycterope. On the other hand, if the zygomatic arch be naturally incomplete in the Scelidothere, the interspace between the malar and temporal portions must be relatively much less than in the Sloth or Ant-eater; for the broken end of the temporal part is separated from the obtusely rounded apex of the malar process in the present specimen by an interval of only one inch.

The articular surface (Pl. XXIII., fig. 2) beneath the zygoma for the lower jaw is flat and even, with the outer and inner margin slightly bent down, but having no definable anterior or posterior limits; its breadth is two inches. It differs from the corresponding surface in the Orycterope in being separated by a relatively wider interval from the tympanic bone, and in wanting consequently the support which the bony meatus auditorius gives in the Orycterope to the back part of the mandibular joint. The Armadillos differ still more from the Scelidothere in this important part of the cranial organization, inasmuch as the glenoid cavity is not only protected behind by the descending os tympanicum, but also in front by a corresponding vertical downward extension of the os malæ. The Scelidothere in the general form and relative position of the surface for the articulation of the lower jaw resembles the Glossothere more closely than any other Edentate animal with which I have been able to compare it.

The malar bone of the Megatherium presents, as is well known, two characters, in which it conspicuously differs from that of the Orycterope and Armadillos, and approximates in an equally marked degree to the Sloths; these characters consist in a process ascending as if to complete the posterior circumference of the orbit, and another process descending outside the lower jaw to give advantageous and augmented surface of attachment to the masseteric muscle, in its character of a protractor of the jaw. Now both these modifications of the malar bone are present in the Scelidothere, and are the chief if not the sole marks of the affinity to the Megatherium which the structure of the cranium affords. They are, however, the more interesting, perhaps, on that account, and because they are associated with other and more numerous characters approximating the species in question to the ordinary terrestrial as distinguished from the arboreal Edentata. For if the Scelidothere, instead of the Megathere, had been discovered half a century ago, and if its true nature and affinities had been in like manner elucidated by the genius and science of a Cuvier; and supposing on the other hand that the Megatherium instead of the Scelidothere had been one of the novel and interesting fruits of Mr. Darwin's recent exploration of the coast of South America, then the affinities of the Megathere with the Sloths would undoubtedly have been viewed from a truer point than at the time when, —the Scelidothere, and analogous transitional forms, being unknown,—it was regarded as a gigantic Sloth.

Having indicated the principal characters of the cranium of the Scelidothere,

which determine its affinities amongst the *Edentata*, there next remains to be considered the relative position, extent, and connections, of the different bones composing the cranium.

The occipital bone constitutes the whole of the posterior, the usual proportion of the inferior, and a small part of the upper and lateral portions of the cranial cavity: there is a small descending ex-occipital process immediately exterior to the condyle: above this part the occipital bone is articulated to the mastoid process of the temporal, and the supra-occipital plate is joined by a complex dentated lambdoidal suture to the two parietals, without the intervention of interparietal or Wormian bones; the course and form of the lambdoidal suture is shown in Pl. XXII; it has the same relative position as in the Orycterope; in the Armadillos, the suture runs along the angle between the posterior and superior surfaces of the skull. The thickness of the occipital bone, at this angle, in the Scelidothere, exceeds an inch, and its texture consists of a close massive diploë, between the dense outer and inner tables, (Pl. XXIII. fig. 1.)

The squamous portion of the temporal bone has a very slight elevation, not extending upon the side of the cranium more than half an inch above the zygoma; it is thus relatively lower than in the *Orycteropus;* but is similarly bounded above by an almost straight line, (Pl. XXI., fig. 1.) The mastoid process is small, compressed, with a rounded contour; immediately internal to it is a very deep depression, corresponding to that for the digastric muscle. But the most interesting features in this region of the temporal bone consist in the free condition of the tympanic bones, and the presence of a semicircular pit, immediately behind the tympanic bone for the articulation of the styloid element of the hyoid or tongue-bone: in these points we trace a most remarkable correspondence with the Glossothere, and in the separate tympanic bone the same affinity to the Orycteropus, as has been already noticed in the more bulky extinct Edental.

This correspondence naturally leads to a speculation as to the probable generic relationship between the Glossothere and Scelidothere: now it may first be remarked that the styloid articular depression is relatively much larger and much deeper in the Glossothere than in the Scelidothere; in the former its diameter equals, as we have seen, one inch; in the Scelidothere it measures only a third of an inch, the whole cranium being about two-fifths smaller; if we turn next to the anterior condyloid foramina, which in the Scelidothere are double on each side, we obtain from them evidence that the muscular nerve of the tongue could only have been one-third the size of that of the Glossothere. These proofs of the superior relative development of the tongue in the Glossothere indicate a difference of habits, and a modification, probably, of the structure of the locomotive extremities; and when we associate these deviations from the Scelidothere, with